BANGALORE METRO RAIL CORPORATION LIMITED

TENDER DOCUMENT

Supply, installation, testing and commissioning of a VRF air conditioning system, along with the smoke extraction system, firefighting, fire alarm system and BMS integration works for the newly opened corridor connecting Platform 2 to Platforms 3 and 4 at Kempegowda Metro Station, BMRCL

TENDER No: BMRCL/2024-25/OW/WORK_INDENT59

VOLUME 02
FINANCIAL PACKAGE

Feb-2025

BANGALORE METRO RAIL CORPORATION LIMITED
III Floor, BMTC Complex, K H Road, Shanthinagar
Bangalore – 560 027 Karnataka

Driving Bangalore Ahead

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VOLUME 2: FINANCIAL PACKAGE
BILL OF QUANTITIES (PRICING DOCUMENT)

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BILL OF QUANTITY

Tender No: BMRCL/2024-25/OW/WORK_INDENT59

SLN	DESCRIPTION	UNIT	QT Y	Rate	Amount
1	Supply, lifting, shifting, local transport, port clearance, insurance, installation, testing and commissioning, Rubber pad etc of R410 A **VRF outdoor unit (ODU)** complete with hermetic **SCROLL** compressor, heat exchanger, inverter controller, multi-step function to meet load fluctuation, axial flow quiet operation condenser fans, MS support stand with black paint, starter panel, microprocessor based control panel, modular type construction, safety devices, controls, fault alarm indications, memory storage, hydrophilic coated condenser coil with copper tube and copper header, condenser guard, fan guard, CRC coated outer casing, vibration isolators, compressor jacket; as per the specification The VRV systems should have both heating & cooling modes. The capacity shall be as indicated below. **Refrigerant - R410a**	–	–	–	–
2	VRF OUT DOOR UNIT 22 HP, Three Phase- Top Discharge	Nos	3		
2.1	Supply of INDOOR MACHINE & control panel	–	–	–	–
2.2	VRF - 3 Tr Ducted Split Units	Nos	1		
2.3	VRF - 6 Tr Ducted Split Units	Nos	2		
2.4	VRF - 8 Tr Ducted Split Units	Nos	5		
2.5	Wired Remote	Nos	8		
2.6	Refnet Joints	Nos	9		
3	Supply & installation of 18G, Hard drawn copper Refrigerant piping, duly insulated with closed cell elastomeric nitrile rubber insulation, class-o, covered with fibre glass cloth and two layers of shield coating, complete with elbows, T joints, sleeves etc., with GSS slotted rail supporting arrangement and GI clamp for individual pipes.	Rmt	310		
4	Supply, Installation & testing of CPVC pipes for Drain pipes with Insulation up to the shaft as per specifications and approved drawings from each indoor unit to respective drain pointed as indicated in the layout drawing.				
4.1	25 mm Dia	Rmt	60		
4.2	32 mm Dia	Rmt	50		
4.3	50mm Dia	Rmt	70		
5	Supply & installation of control cum transmission wiring in PVC FRLS Conduit between ODU & IDU of copper	Rmt	565		

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	(2 core X 0.75 sq mm).				
6	Towards Charges for Supply of GI Sheet Metal Duct with supporting materials. Thickness of Materials as below and SMACNA Standard				
6.1	24 SWG	Sqmtr	300		
6.2	22 SWG	Sqmtr	300		
6.3	20 SWG	Sqmtr	150		
7	Towards Charges for Supply & Installation of 13mm Thickness Thermal Insulation for Duct with necessary fittings	Sqmtr	750		
8	Towards Charges for Supply & Installation of 15mm Thickness Acoustic Insulation for Duct with necessary fittings	Sqmtr	180		
9	Towards Charges for Supply & Installation of Aluminium Powder coated 4 Way Diffuser with Collar Damper for Supply Air Flow. The cost shall Include Butterfly Damper, Mixing Box , Flexible Duct and Other Supporting Materials	Nos	80		
10	Towards Charges for Supply & Installation of Aluminium Powder coated 4 Way Diffuser without Collar Damper for Return Air Flow	Nos	80		
11	Towards Charges for Supply & Installation of Aluminium Powder coated Linear Grill with Collar Damper for Exhaust and Fresh Air.	Sqmtr	12		
12	Towards Charges for Supply & Installation of Volume Control Damper for Supply and Return Air Ducts.	Sqmtr	6		
13	Towards Charges for Supply & Installation of Motorised Fire Damper with 90 Mins Fire Rating with UL Certified. The damper should be 450mm Sleeve as per the site condition.	Sqmtr	2		
14	Towards Charges for Supply of Actuator with Control Panel for Fire Damper operation. The Torque should equal to Damper required sizes	Nos	2		
15	Charges for Drain Pump for Ducted Units	Nos	8		
16	Charges for MS Support for Duct and Other Supporting Works	Kgs	1000		
17	Charges for Supply and Installation of Armoured Copper Power Cable to VRF Outdoor and Indoor Unit				
17.1	4 Core 16 Sqmm Copper Cable	Rmt	30		
17.2	4 Core 70 Sqmm Copper Cable	Rmt	180		
17.3	4 Core 4 Sqmm Copper Cable	Rmt	90		
17.4	4 Core 2.5 Sqmm Copper Cable	Rmt	400		
18	Towards Charges for Supply and installation of Power Panel for VRF Indoor and Outdoor Units VRF Indoor	Nos	1		

	Unit Power Panel with 1 Incomer and 8 Output Feeder. Each Outlet have individual MCB.				
19	VRF Outdoor Unit Power Panel with 1 Incomer and 3 Output Feeder. Each Output have Individual MCB with Rain water proof to be considered.	Nos	1		
20	250 Amps Breaker with Internal Wiring Works at Existing Main Panel	Nos	1		
21	Towards Charges for Supply and installation of Canvas connection for duct mouth.	Nos	8		
22	Gas Charging with R410 (Additional Charging for Pipeline)	Kgs	140		
23	Towards Charges for Supply of MS Floor Mound outdoor Stand	Nos	3		
24	Towards Charges for Supply and Installation of Tray for Copper Pipeline with Supporting Materials. Cover to be considered only exposed area. 600 mm perforated tray	Rmt	300		
25	Charges for Existing Sprinkler modification along with supply and Laying of Pipes and supporting materials to extend the Pipes. The cost shall include One coat Primer and 2 Coat of Paints with Supporting System	Rmt	75		
26	Charges for Fire Integration of HVAC System with existing FAPA System. The cost shall Include Laying of Cable between Units to Fire Alarm system. The cost shall also include Programming of PLC and Testing and Recommissioning of Existing System	Lot	1		
27	Charges for BMS Integration System work for additional HVAC System along with Damper Interlock and Operation of smoke extract system. The cost shall Include Cabling between Damper actuator and DDC controller	Lot	1		
28	Towards Charges for Lifting, Shifting and Positioning of Outdoor VRF Units	Lot	1		
29	Charges for Scaffolding	Lot	1		
30	Charges for Civil Works	Lot	1		
(A)	**Sub Total:**				
(B)	**Contractor margin @ 3% on (A):**				
(C)	**Labour cess @ 1% on (A+B):**				
(D)	**Total in Rs. (A+B+C):**				**Financial offer must be submitted through e-procurement portal only (https://kppp.karnataka.gov.in/)**

The **Tender Total** comprises:

Indian Rupees: …… (in figures)

…… (in words)

Note:

1. *The Tenderer shall fill in and complete the Bill of Quantities (Financial Package) online through Karnataka Public Procurement Portal (eProcurement portal) only and* ***no hardcopy of commercials should be attached or disclosed elsewhere*** *Unit rates and prices shall be quoted by the Tenderer in Indian Rupees only*.
2. The rates and prices quoted for each item shall be inclusive of all applicable taxes and duties **excluding CGST & SGST**. BMRCL shall pay the applicable CGST & SGST as invoiced by the contractor to BMRCL. The quoted price also includes insurance, transportation up to destination, handling, installation, royalties & any other charges leviable and payable by the Contractor to the authorities and including Tax to be deducted at source.
3. Income tax deduction:

   Income tax (TDS) shall be deducted as per the prevailing rate and remitted to the Income Tax authorities and Form 16 shall be furnished by BMRCL in proof of remittance to IT Department. For availing lower deduction of Income Tax, necessary certificate for each financial year issued by the Income Tax Authority shall be furnished by the Contractor, failing which IT at the maximum rate will be deducted.
4. The Contractor shall maintain complete records in respect of payments made by them towards IGST/GST payable to various authorities (except Income Tax or Corporate Tax). The detailed records shall however remain open for inspection by the Employer/ Engineer at any time and copies of the records shall be furnished as required by the Employer.
5. The Contractor shall be solely responsible for discharging all the statutory payments to the authorities concerned including custom duty, IGST and GST.
6. The Price quoted by the Tenderer shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account, unless provided otherwise in the General Conditions of Contract/Special Conditions of contract.
7. Item for which no rate or price has been entered in will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities (refer: ITT Clause 11.2 and GCC Clause 44.2).
8. Where there is a discrepancy between the rate in figures and words, the lower of the two will govern. [ITT Clause 24.1(a)]
9. Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by quantity, the unit rate quoted shall govern [ITT Clause 24.1(b)]
10. BMRCL will consider the above prices for evaluation of Tender only.

SIGNATURE OF THE TENDERER

MOHANRAJ DORAISWAMY

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